

54. (original) The method of claim 1 wherein said dehydrogenation catalyst is

selected from the group consisting of chrome oxide on gamma alumina, platinum on gamma alumina, palladium on gamma alumina, platinum/lithium on gamma alumina, platinum/potassium on gamma alumina, platinum/tin on gamma alumina, platinum/tin on hydrotalcite, platinum/indium on gamma alumina and platinum/bismuth on gamma alumina.

55. (original) The method of claim 1 wherein said dehydrogenation conditions comprise a temperature of from about 300 °C to 700 °C and a pressure of from about 1.1 to about 15 bara.

56. (original) The method of claim 1 wherein hydrogen and said paraffins are fed to said dehydrogenation catalyst.

57. (original) The method of claim 1 wherein hydrogen and said paraffins are fed to said dehydrogenation catalyst at a molar ratio of from about 0.1 to about 20.

58. (original) The method of claim 1 wherein hydrogen and said paraffins are fed to said dehydrogenation catalyst at a molar ratio of from about 1 to about 10.

59. (original) The method of claim 1 wherein said dehydrogenation conditions comprise a residence time effective to maintain a conversion level of said isoparaffinic composition below about 50 mole%.

60. (original) The method of claim 1 wherein said dehydrogenation conditions comprise a residence time effective to maintain a conversion level of said isoparaffinic composition of from about 5 to about 30 mole%.

61. (original) The method of claim 1 wherein said dehydrogenation conditions comprising a residence time effective to maintain a conversion level of said isoparaffinic composition of from about 10 to about 20 mole%.

62. (original) The method of claim 1 wherein said branched olefin composition comprises non-converted paraffins and said non-converted paraffins are separated from said branched olefin composition.

63. (original) The method of claim 62 wherein said non-converted paraffins are recycled to said dehydrogenation catalyst.

64. (original) The method of claim 63 wherein said nonconverted paraffins are separated from said branched olefin product by a procedure selected from the group consisting of extraction, extractive distillation, and absorption.

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65. (original) The method of claim 63 wherein said non-converted paraffins are separated from said branched olefin composition by absorption onto molecular sieves comprising a zeolite.

66. (original) The method of claim 66 wherein said zeolites are selected from the group consisting of zeolite 4A, zeolite 5A, zeolite X, zeolite Y, and combinations thereof.

67. (original) The method of claim 1 wherein at least 75%w of said branched olefin composition comprises olefins having a carbon number of from 14 to 17; and said surfactant is a surfactant sulfate.

68. (original) The method of claim 1 wherein at least 90%w of said branched olefin composition comprises olefins having a carbon number of from 14 to 17; and said surfactant is a surfactant sulfates.

69. (original) The method of claim 1 wherein said average number of branches is from 0.7 to 2.0.

70. (original) The method of claim 1 wherein said average number of branches is from 0.7 to 1.5.

71. (original) The method of claim 1 wherein said average number of branches is from 1.0 to 1.5.

72. (original) The method of claim 1 wherein said number of quaternary aliphatic carbon atoms is 0.3% or less of the carbon atoms present in said branched olefins.

73. (original) The method of claim 1 wherein at least 70%w of said branched olefin composition is said branched olefins.

74. (original) The method of claim 1 wherein at least 90%w of said branched olefin composition is said branched olefins.

75. (original) The method of claim 1 wherein said branched olefin composition comprises at most 10%w linear olefins.

76. (original) The method of claim 1 wherein said branched olefin composition comprises at most 1%w linear olefins.

77. (withdrawn) A process for preparing branched alcohol sulfates, comprising: converting branched olefins into said branched alcohol sulfates, said branched olefins having been obtained by a process comprising;